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         JAN 28
                 USGENE now provides USPTO sequence data within 3 days
                 of publication
NEWS 34
         JAN 28
                 TOXCENTER enhanced with reloaded MEDLINE segment
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NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements

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L1 35 (LHRH(W) ANTAGONIST OR LUTEINIZING(W) HORMONE(W) RELEASING(W) HORMONE(W) ANTAGONIST) AND (0.25(W) MG OR 0.5(W) MG)

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L2 25 DUP REM L1 (10 DUPLICATES REMOVED)

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L2 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:9170 CAPLUS

DOCUMENT NUMBER: 144:143245

TITLE: Bifunctional gonadotropin-releasing hormone antagonist-progesterone analogs with increased

efficacy and duration of action

AUTHOR(S): Ratcliffe, Karen E.; Fraser, Hamish M.; Sellar, Robin;

Rivier, Jean; Millar, Robert P.

CORPORATE SOURCE: Medical Research Council Human Reproductive Sciences

Unit, The Queen's Medical Research Institute,

Edinburgh, EH16 4TJ, UK

SOURCE: Endocrinology (2006), 147(1), 571-579

CODEN: ENDOAO; ISSN: 0013-7227

PUBLISHER: Endocrine Society

DOCUMENT TYPE: Journal LANGUAGE: English

GnRH peptide analogs are widely used to treat diverse clin. conditions. However, they have poor oral activity and exhibit rapid metabolic clearance, thus requiring injection and depot formulation. Because steroid hormones are bound to plasma proteins, the authors explored the possibility of conjugating hydroxylated progesterones to GnRH analogs to reduce metabolic clearance of the peptides. Conjugation of [D-Lys6]GnRH agonist to the  $\alpha$ 11-hydroxyl of  $\alpha$ 11-hydroxyl progesterone via a hemi-succinate bridge increased the plasma half-life after iv injection in rabbits by 3.6-fold while retaining high binding affinity, thus providing proof of concept. Five GnRH antagonists were then synthesized with 21-hydroxyprogesterone conjugated via C21-hydroxyl to positions six (conjugates A and B) and position seven (conjugates C and D) of GnRH antagonists. In the fifth compound the N-terminus of a GnRH antagonist lacking the first two amino acids was conjugated via the C21-hydroxyl to 21-hydroxyprogesterone (conjugate E). All five analogs bound to guinea pig progesterone binding globulin with relatively high affinities (264-1020 nM). Moreover, all five conjugates retained high progestogenic activity in stimulating a progesterone-response-element-driven chloramphenicol acetyltransferase reporter gene in the T47D breast cancer cell line. Conjugation via the  $\epsilon$ -amino function of D-Lys6 (conjugates A and B) produced compds. with high binding affinity for the human GnRH receptor (15 and 7 nM) comparable to that of the unconjugated GnRH antagonists (4 and 26 nM). Conjugation via the  $\epsilon$ -amino function of Lys7 (conjugates C and D) or the N-terminus of an N-terminally truncated antagonist (conjugate E) produced compds. of low binding affinity. Conjugates A and B also exhibited high functional antagonism of GnRH stimulation of inositol phosphate production in COS-7 cells expressing the human GnRH receptor (2.6 and 16 nM) compared with the unconjugated antagonists (1.3 and 122 nM). In accordance with their poor receptor binding affinity, conjugates C, D, and E had poor functional antagonism. Preliminary dose-finding studies in female marmosets showed transitory progesterone inhibition by 0.25 mg and prolonged suppression of 12 and 17 d by 0.5- and 1.0-mg doses. Injection of conjugate A in adult male marmosets (0.5 mg s.c.) rapidly suppressed plasma testosterone levels, which remained suppressed for at least 3 d. In contrast, the unconjugated parent antagonist alone or with progesterone suppressed testosterone for only 8 h to 1 d. The findings demonstrate that conjugation of progesterone to GnRH antagonists conveys plasma binding and progestogenic properties and increases their efficacy and duration of action in vivo. These new GnRH antagonists show promise as therapeutic agents for hormone-dependent diseases and as contraceptives.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:182426 CAPLUS

DOCUMENT NUMBER: 142:233845

TITLE: LHRH-antagonists in the treatment

of fertility disorders

INVENTOR(S): Bouchard, Philippe; Frydman, Rene; Devroey, Paul;

Diedrich, Klaus; Engel, Jurgen

PATENT ASSIGNEE(S): Fr.

SOURCE: U.S. Pat. Appl. Publ., 7 pp., Cont. of U.S. Ser. No.

786,937.

CODEN: USXXCO

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
				-		
US 2005049200	A1	20050303	US 2003-661780		20030915	
PRIORITY APPLN. INFO.:			US 1996-11282P	P	19960207	
			US 1997-786937	В2	19970122	

A method of treating infertility disorders by (1) administering an LH-RH AΒ antagonist, preferably Cetrorelix, in amts. to selectively suppress endogenous LH but not FSH secretion and (2) inducing follicle growth by administration of exogenous gonadotropin. The selective suppression OF LH allows FSH secretion to be at natural levels thereby not affecting individual estrogen development. The LH-RH antagonist can be given as a single or dual s.c. dose in the range of 1 mg to 10 mg, preferably 2 mg-6 mg. In multiple dosing-posol., LH-RH antagonist can be administered s.c. in an amount in the range of 0.1 to 0.5 mg of LH-RH antagonist/day. LH-RH antagonist is applied starting cycle day 1 to 10, preferably on day 4 to 8, and ovulation can be induced between day 9 and 20 of the menstruation cycle by administering rec. LH, native LH-RH, LH-RH agonist or by HCG. In addition rec. LH, native LH-RH or LH-RH agonist can be given to avoid hyperstimulation syndrome and native LH-RH or a LH-RH agonist can be administered to avoid luteal phase stimulation by neutralizing the neg. effects of HCG.

ANSWER 3 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1110537 CAPLUS

DOCUMENT NUMBER: 143:399986

TITLE: Effects of testosterone and levonorgestrel combined

with a  $5\alpha$ -reductase inhibitor or

gonadotropin-releasing hormone antagonist on

spermatogenesis and intratesticular steroid levels in

normal men

AUTHOR(S): Matthiesson, Kati L.; Stanton, Peter G.; O'Donnell,

Liza; Meachem, Sarah J.; Amory, John K.; Berger, Richard; Bremner, William J.; McLachlan, Robert I. Prince Henry's Institute of Medical Research and

CORPORATE SOURCE: Department of Obstetrics and Gynecology, Monash

Medical Center, Monash University, Clayton, Victoria,

3168, Australia

SOURCE: Journal of Clinical Endocrinology and Metabolism

(2005), 90(10), 5647-5655

CODEN: JCEMAZ; ISSN: 0021-972X

PUBLISHER: Endocrine Society

DOCUMENT TYPE: Journal LANGUAGE: English

Context: Combination of a GnRH antagonist (acyline), types I and II, AB  $5\alpha$ -reductase inhibitor (dutasteride) or levonorgestrel (LNG) with testosterone (T) treatment may augment the suppression of spermatogenesis and intratesticular (iT) steroids. Objective: The objective of this study was to assess the effects of combined hormonal contraceptive regimens on germ cell populations and iT steroids. Design, Setting, and Participants: Twenty-nine normal health men enrolled in this prospective, randomized, 14-wk study at the University of Washington. Intervention(s): Twenty-two men received 8 wk of T enanthate (TE; 100 mg, i.m., weekly) combined with (1) 125  $\mu$ g LNG daily, orally; (2) 125  $\mu$ g LNG plus 5 mg dutasteride daily, orally; (3) 300  $\mu g/kg$  acyline twice weekly, s.c.; or (4) 125  $\mu g$  LNG daily, orally, plus 300  $\mu g/kg$ acyline twice weekly, s.c. Subjects then underwent a vasectomy and

testicular biopsy. Control men proceeded directly to surgery. Main Outcome Measure(s): The main outcome measures were germ cells and iT steroids [T, dihydrotestosterone,  $3\alpha$ - and  $\beta$ -androstanediol (Adiol), and estradiol (E2)]. Results: High iT levels of all androgens (6- to 123-fold serum levels) and E2 (407-fold serum levels) were found in control men. The iT T (1.9 - 2.6% control) and iT  $3\beta$ Adiol (16 - 34% control) levels decreased with all treatments. The iT dihydrotestosterone (13 - 29% control) and iT  $3\alpha \text{Adiol}$  (44 - 47% control) levels decreased with all but the TE plus LNG treatment. The iT E2 levels decreased only in the TE plus acyline group (28% control). Germ cells from type B spermatogonia onward were suppressed, with no differences between groups found. Variable sites of impairment of germ cell progression were evident between men (spermagonial maturation, meiosis 1 entry, and spermiation). Other than a neg. correlation between iT  $3\alpha A diol$  and haploid germ cell number, no correlations between germ cell number and gonadotropins, sperm concentration, or iT steroids were found. Conclusions: A similar high testicular:serum gradient exists for E2 and T in normal men, and 8 wk of gonadotropin suppression markedly reduces iT T, with  $5\alpha$ -reduced androgens and E2 levels decreasing to a much lesser degree. The heterogeneity of the germ cell response, regardless of treatment, gonadotropins or iT steroids, points to the individual sensitivity of sites in germ cell development, which is worthy of addnl. exploration.

REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:357532 CAPLUS

DOCUMENT NUMBER: 143:91168

TITLE: Recombinant luteinizing hormone supplementation to recombinant follicle-stimulating hormone induced ovarian hyperstimulation in the GnRH-antagonist

multiple-dose protocol

Griesinger, G.; Schultze-Mosgau, A.; Dafopoulos, K.; AUTHOR(S):

Schroeder, A.; Schroer, A.; von Otte, S.; Hornung, D.;

Diedrich, K.; Felberbaum, R.

CORPORATE SOURCE: University Clinic of Schleswig Holstein, Campus

Luebeck, Luebeck, 23858, Germany

SOURCE: Human Reproduction (2005), 20(5), 1200-1206

CODEN: HUREEE; ISSN: 0268-1161

Oxford University Press PUBLISHER:

DOCUMENT TYPE: Journal LANGUAGE: English

AB Suppression of endogenous LH production by mid-follicular phase GnRH-antagonist administration in controlled ovarian hyperstimulation protocol using recombinant (rec) FSH prepns. void of LH activity may potentially affect ovarian response and the outcome of IVF treatment. The present study prospectively assessed the effect of using a combination of recFSH and recLH on ovarian stimulation parameters and treatment outcome in a fixed GnRH-antagonist multiple dose protocol. A total of 127 infertile patients with an indication for IVF or ICSI were recruited and randomized (using sealed envelopes) to receive a starting dose of either 150 IU recFSH (follitropin  $\alpha$ ) or 150 IU recFSH plus 75 IU recLH (lutropin  $\alpha$ ) for ovarian hyperstimulation. GnRH-antagonist (Cetrorelix) 0.25 mg was administered daily from stimulation day 6 onwards up to and including the day of the administration of recombinant HCG (chorion gonadotropin  $\boldsymbol{\alpha})\text{.}$ Gonadotropin dose adjustments were allowed from stimulation day 6 onwards, HCG was administered as soon as three follicles  $\geq 18~\text{mm}$  were present. The primary outcome parameter was treatment duration until administration of HCG. Exogenous LH did not shorten the time necessary to reach ovulation induction criteria. Serum estradiol (E2) and LH levels

were significantly higher on the day of HCG administration in the recLH-supplemented group (1924.7 vs. 1488.3 pg/mL, and 2.1 vs. 1.4 IU/l, resp.). Thus, except for higher E2 and LH levels on the day of HCG administration, no pos. trend in favor of addnl. LH was found as defined by treatment outcome parameters.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:59356 CAPLUS

DOCUMENT NUMBER: 142:233478

TITLE: Novel male hormonal contraceptive combinations: The

hormonal and spermatogenic effects of testosterone and

levonorgestrel combined with a  $5\alpha$ -reductase

inhibitor or gonadotropin-releasing hormone antagonist AUTHOR(S): Matthiesson, Kati L.; Amory, John K.; Berger, Richard;

Ugoni, Antony; McLachlan, Robert I.; Bremner, William

٦Ţ.

CORPORATE SOURCE: Prince Henry's Institute of Medical Research and

Department of Obstetrics and Gynaecology, Monash Medical Centre, Monash University, Clayton, 3168,

Australia

SOURCE: Journal of Clinical Endocrinology and Metabolism

(2005), 90(1), 91-97

CODEN: JCEMAZ; ISSN: 0021-972X

PUBLISHER: Endocrine Society

DOCUMENT TYPE: Journal LANGUAGE: English

AB The authors postulated that the addition of a combined types I and II,  $5\alpha$ -reductase inhibitor (dutasteride) or long-acting GnRH antagonist (acyline) to combination testosterone plus levonorgestrel treatment may be advantageous in the suppression of spermatogenesis for male contraception. This study aimed to examine effects of novel combination contraceptive regimens on serum gonadotropins and androgens and sperm concentration This study

was divided into three phases: screening (2 wk), treatment (8 wk), and recovery (4 wk). Twenty-two men (-6/group) received 8 wk of treatment with testosterone enanthate (TE, 100 mg i.m. weekly) combined with one of the following:. 1) Levonorgestrel (LNG) 125  $\mu$ g orally daily;. 2) LNG 125  $\mu$ g plus dutasteride 0.5 mg orally daily;. 3) Acyline 300  $\mu q/kq$  s.c. every 2 wk (as a comparator for any addnl. progestin effects); or. 4) LNG 125  $\mu$ g orally daily plus acyline 300  $\mu$ g/kg s.c. every 2 wk. Serum gonadotropin levels were similarly suppressed by all treatments, falling to a nadir between 1.2 and 3.4% and 0.5 and 0.8% baseline for FSH and LH, resp. Serum dihydrotestosterone levels were significantly decreased in the dutasteride group throughout the treatment period to a nadir of 31% baseline (wk 7). No significant differences in sperm concns. among treatment groups were seen. Severe oligospermia (0.1-3 million/mL) or azoospermia was seen in none of five and four of five in TE + LNG; two of six and four of six in TE + LNG + dutasteride; two of six and four of six in TE + acyline; and one of five and three of five in TE + LNG + acyline groups, resp. There was one non-responder in each of the TE + LNG and TE + LNG + acyline groups. authors conclude that the addition of a combined types I and II,  $5\alpha$ -reductase inhibitor or long-acting GnRH antagonist to a testosterone plus LNG regimen provides no addnl. suppression of gonadotropins or sperm concentration over an 8-wk treatment period. However, further evaluation of the effects of these regimens on the testis (including testicular steroid levels and germ cell maturation) and the treatment of larger nos. of men (and for longer periods) may provide data to support their place in contraceptive development. REFERENCE COUNT: THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS 45

L2 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:1068574 CAPLUS

DOCUMENT NUMBER: 142:233468

TITLE: Restoration of endocrine and ovarian function after

stopping GnRH antagonist treatment in goats

AUTHOR(S): Gonzalez-Bulnes, A.; Lopez-Sebastian, A.;

Garcia-Garcia, R. M.; Veiga-Lopez, A.; Souza, C. J.

H.; McNeilly, A. S.

CORPORATE SOURCE: Departamento de Reproduccion Animal INIA, Madrid,

28040, Spain

SOURCE: Theriogenology (2005), 63(1), 83-91

CODEN: THGNBO; ISSN: 0093-691X

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal LANGUAGE: English

AB The authors have tested if the high number of unfertilized ova and degenerated embryos found in superovulated goats previously treated with GnRH antagonist can be related to a prolongation of gonadotrophin down-regulation and/or alterations in follicular function during the period of administration of the superovulatory treatment, around 4 days after the end of the antagonist treatment. A total of 15 does were treated with intravaginal progestagen sponges and daily injections of 0.5 mg of the GnRH antagonist Antarelix for 6

days, while 5 does acted as controls receiving saline. During the

antagonist treatment, the mean plasma LH concentration was lower in treated

than

control goats (0.5 vs. 7 ng/mL); however, the FSH levels remained unaffected (0.8 vs. 8 ng/mL). In this period, treated does also showed an increase in the number of small follicles with 2-3 mm in size (10.7 vs. 8.4), and a decrease in both the number of follicles  $\geq 4$  mm in size (5.0 vs. 6.8) and the secretion of inhibin A (120.9 vs. 151.6 pg/mL). After cessation of the antagonist treatment, there was an increase in LH levels in treated goats from the day after the last Antarelix injection (Day 1), so that LH levels were the same as controls on Day 3 (0.6 vs. 0.6 ng/mL). However, there were even greater nos. of small follicles than during the period of antagonist injections (15.4 in treated vs. 8.9 in control). Moreover, the number of  $\geq 4$  mm follicles and the secretion of inhibin A remained lower in treated goats (3.9 follicles and 84.4 pg/mL vs. 5.4 follicles, and 128.9 pg/mL). These results indicate that pituitary secretion of gonadotrophins is restored shortly after the end of

antagonist treatment, but activity of ovarian follicles is affected.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:470830 BIOSIS DOCUMENT NUMBER: PREV200400466840

TITLE: Development and validation of a HPLC method for routine

quantification of the decapeptide Cetrorelix in liposome

dispersions.

AUTHOR(S): Grohganz, Holger [Reprint Author]; Schlafli, Oliver;

Rischer, Matthias; Brandl, Martin

CORPORATE SOURCE: Inst PharmDept Pharmaceut and Biopharmaceut, Univ Tromso,

N-9037, Tromso, Norway holgerg@farmasi.uit.no

SOURCE: Journal of Pharmaceutical and Biomedical Analysis, (March

10 2004) Vol. 34, No. 5, pp. 963-969. print.

CODEN: JPBADA. ISSN: 0731-7085.

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 9 Dec 2004

Last Updated on STN: 9 Dec 2004

The development and validation of an HPLC method for the quantification of AΒ the decapeptide Cetrorefix (acetyl-D-2-naphthylalanyl-D-4chlorphenylalanyl-D-3-pyridylalanyl-seryl-tyrosyl-D-citrullyl-leucylarginyl-prolyl-D-alaninamide), a potent antagonist of the luteinising hormone-releasing hormone in liposome dispersions is described. An isocratic reversed phase method with UV-detection appeared most appropriate. Several detergents were tried to disrupt liposomes. Furthermore, detergents turned out to be useful, because they minimised unwanted loss of Cetrorelix due to adsorption to the vial surfaces. Triton X-100 was found most effective, while sodium cholate led to quantification problems. In the presence of 2.5% Triton X-100 calibration curves with a high degree of linearity were achieved in the desired range of 0.2-10 mug/ml. The limits of detection and quantification of Cetrorelix were calculated from the peak-to-noise ratio to be 11 and 37 ng/ml, respectively. The repeatability of the method in presence of phospholipid and Triton was good with relative standard deviations (R.S.D.) ranging from 0.8% (at 0.05 mug/ml) to 1.5% (at 0.2 mug/ml). presence of liposomes at phospholipid contents of up to 0. 25 mg/ml did not significantly affect the slope or linearity of the calibration curve, nor the peak-to-noise ratio. Copyright 2003 Elsevier B.V. All rights reserved.

L2 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:518356 CAPLUS

DOCUMENT NUMBER: 139:333259

TITLE: The administration of the GnRH antagonist, cetrorelix,

to oocyte donors simplifies oocyte donation

AUTHOR(S): Thong, K. J.; Yong, P. Y.; Menezes, Q.

CORPORATE SOURCE: Assisted Conception Programme, Edinburgh Fertility and

Reproductive Endocrine Centre, Edinburgh, EH16 4SA, UK

SOURCE: Human Reproduction (2003), 18(6), 1256-1258

CODEN: HUREEE; ISSN: 0268-1161

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal LANGUAGE: English

The authors report their experience on the efficacy of a new regimen of the GnRH antagonist, cetrorelix, and recombinant FSH, Gonal-F, for controlled ovarian stimulation in a donor oocyte program. Six oocyte donors were commenced on Gonal-F (150 IU) and two on Gonal-F 225 IU daily on day 4 together with cetrorelix 0.25 mg daily on day 8 until the day of administration of hCG. Six premenopausal recipients were down-regulated with intranasal Nafarelin 400  $\mu g$  twice daily; two women with premature menopause did not require down-regulation for synchronization between donor and recipient cycles. The median (range) of oocytes retrieved and the median (range) fertilization rates were 7 (3-13) and 50% (0-71%) resp. With the exception of a recipient who had failed fertilization, seven recipients had two embryos transferred. The median (range) number of days of ovarian stimulation, cetrorelix administration and number of Gonal-F ampoules administered for ovarian stimulation were 9 (7-12) days, 5 (3-8) and 18 (14-24) resp. The clin. pregnancy rate per cycle was 50% (4/8) and one of the latter women miscarried at eight weeks gestation. Three women (37.3%) had full term deliveries. This preliminary study has shown that using a combination of cetrorelix and Gonal-F resulted in a high pregnancy rate, reduced the duration of treatment for the donor and simplified oocyte donation.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

DOCUMENT NUMBER: PubMed ID: 12470526

TITLE: Rescue IVF and coasting with the use of a GnRH antagonist

after ovulation induction.

AUTHOR: Fatemi Human Mousavi; Platteau Peter; Albano Carola; Van

Steirteghem Andre; Devroey Paul

CORPORATE SOURCE: Centre for Reproductive Medicine, Dutch-Speaking Free

University of Brussels, Laarbeeklaan 101, 1090 Brussels,

Belgium.. hmousavi@az.vub.ac.be

SOURCE: Reproductive biomedicine online, (2002 Nov-Dec) Vol. 5, No.

3, pp. 273-5.

Journal code: 101122473. ISSN: 1472-6483.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: (CASE REPORTS)

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200301

ENTRY DATE: Entered STN: 17 Dec 2002

Last Updated on STN: 31 Jan 2003 Entered Medline: 30 Jan 2003

AΒ The major risks of exogenous gonadotrophin therapy for ovulation induction in a patient with polycystic ovaries (PCO) are multiple pregnancies and ovarian hyperstimulation syndrome (OHSS). This case report describes a 23-year-old patient, who was referred to the Centre for Reproductive Medicine in Brussels because of a high risk of developing OHSS and rising LH following ovulation induction with a low-dose step-up protocol using gonadotrophins. After counselling the patient, the decision was made to perform a rescue IVF cycle. The patient was first coasted with 0.25 mg ganirelix; the serum oestradiol concentrations decreased and the LH peak was successfully suppressed. No OHSS occurred. An ongoing twin pregnancy was achieved after the transfer of two embryos. This case report demonstrates the feasibility of coasting with LH-releasing hormone (LHRH) antagonists (0. 25 mg ganirelix) and the usefulness of the antagonists for ovulation induction cycles in patients who need rescue IVF.

L2 ANSWER 10 OF 25 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 2002259522 MEDLINE DOCUMENT NUMBER: PubMed ID: 11998957

TITLE: Plasma and follicular fluid concentrations of LHRH antagonist cetrorelix (Cetrotide) in controlled

ovarian stimulation for IVF.

AUTHOR: Ludwig M; Albano C; Olivennes F; Felberbaum R E; Smitz J;

Ortmann O; Romeis P; Niebch G; Pechstein B; Riethmuller-Winzen H; Devroey P; Diedrich K

CORPORATE SOURCE: Department of Gynecology and Obstetrics, Medical University

of Lubeck, Germany.. Ludwig\_M@t-online.de

SOURCE: Archives of gynecology and obstetrics, (2002 Jan) Vol. 266,

No. 1, pp. 12-7.

Journal code: 8710213. ISSN: 0932-0067. PUB. COUNTRY: Germany: Germany, Federal Republic of DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200210

ENTRY DATE: Entered STN: 10 May 2002

Last Updated on STN: 8 Oct 2002 Entered Medline: 4 Oct 2002

AB Cetrorelix was administered in differing daily dosages for controlled ovarian stimulation. The dosage levels were 3 mg (9 cycles), 1 mg (19 cycles), 0.5 mg (43 cycles), 0.

25 mg (46 cycles) and 0.1 mg (7 cycles). In the 3 mg, 1

mg and 0.5 mg group the respective median plasma concentrations of cetrorelix on the day of oocyte pick-up (OPU) were 2.10 ng/ml, 1.42 ng/ml and 0.88 ng/ml and 1.03 ng/ml, 0.46 ng/ml and 0.49 ng/ml on the day of embryo transfer (ET). In the 0.  $25~\mathrm{mg}$  and  $0.1~\mathrm{mg}$  groups plasma cetrorelix levels were below the limit of quantification. The cetrorelix concentrations in follicular fluid (FF) in the 0.25 mg group were detectable in only 14 out of 44 samples, while in the 0.1 mg group no detectable concentrations could be obtained. We also examined 80 cycles after single doses of 5 mg (7 cycles), 3 mg (42 cycles), and 2 mg (31 cycles) cetrorelix. On the day of OPU the respective median plasma concentrations of cetrorelix were 0.57 ng/ml, 0.62 ng/ml, and 0.56 ng/ml, and 0.61 ng/ml and 0.28 ng/ml on the day of ET in the 5 mg and 3 mg groups. In the 2 mg group, the plasma concentrations fell to below limits of quantification in 8/9 samples on the day of ET. In 26 out of 27 FF samples cetrorelix was detectable in the 3 mg single dose group (median level: 0.69 ng/ml).

ANSWER 11 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

2001:886135 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 136:96372

TITLE: Comparison of luteal phase profile in gonadotrophin

stimulated cycles with or without a

gonadotrophin-releasing hormone antagonist

Ragni, Guido; Vegetti, Walter; Baroni, Elena; Colombo, AUTHOR(S):

Michela; Arnoldi, Mariangela; Lombroso, Giancarlo;

Crosignani, Pier Giorgio

CORPORATE SOURCE: Infertility Unit, Department of Obstetrics and

Gynaecology, University of Milan, Milan, 20122, Italy

SOURCE: Human Reproduction (2001), 16(11), 2258-2262

CODEN: HUREEE; ISSN: 0268-1161

PUBLISHER: Oxford University Press

Journal DOCUMENT TYPE: LANGUAGE: English

The aim of our study was to explore luteal phase hormone profiles in gonadotropin-stimulated cycles with or without gonadotropin-releasing hormone (GnRH) antagonist therapy during intrauterine insemination (IUI). Forty-one infertile couples were recruited in this randomized clin. study. The 19 patients included in group A were treated for 21 cycles with recombinant FSH 150 IU/day starting from day 3 of the cycle and with the GnRH antagonist cetrorelix at the dose of 0.25 mg/day starting from the day in which a follicle with a mean diameter of  $\geq \! 14$  mm was seen at ultrasound scan. Cetrorelix was administered until human chorionic gonadotropin (HCG) administration. The 22 patients included in group B were administered recombinant FSH alone at the same dosage for 27 cycles. The two treatment groups showed a similar increase in progesterone concentration during the luteal phase. In the mid-luteal phase (day 6 after HCG), estradiol concns. in group B were significantly higher compared with group A but the estradiol:progesterone ratio was similar in the two groups. Serum LH was completely suppressed during the follicular phase only in group A, concomitantly with GnRH antagonist administration. A total of six pregnancies, all ongoing, were achieved (14.3% per patient and 12.2% per cycle), equally distributed in group A and in group B. GnRH antagonists can be safely administered in gonadotropin-stimulated IUI cycles without luteal phase supplementation because no deleterious effects of GnRH antagonist administration were noted on luteal progesterone concentration

or on the duration of the luteal phase.

THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 32 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 12 OF 25 MEDLINE on STN ACCESSION NUMBER: 2000329049 MEDLINE DOCUMENT NUMBER: PubMed ID: 10872648

TITLE: Pituitary and gonadal endocrine effects and

pharmacokinetics of the novel luteinizing

hormone-releasing hormone

antagonist teverelix in healthy men--a

first-dose-in-humans study.

AUTHOR: Erb K; Pechstein B; Schueler A; Engel J; Hermann R

CORPORATE SOURCE: Department of Human Pharmacology, Corporate Research, ASTA

Medica AG, Frankfurt am Main, Germany...

KatharinaErb@t-online.de

SOURCE: Clinical pharmacology and therapeutics, (2000 Jun) Vol. 67,

No. 6, pp. 660-9.

Journal code: 0372741. ISSN: 0009-9236.

PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)

Journal; Article; (JOURNAL ARTICLE)

(RANDOMIZED CONTROLLED TRIAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 200007

ENTRY DATE: Entered STN: 14 Jul 2000

Last Updated on STN: 14 Jul 2000 Entered Medline: 6 Jul 2000

Teverelix is a novel synthetic peptidic luteinizing AB BACKGROUND. hormone-releasing hormone (LHRH) antagonist. METHODS: Single subcutaneous morning doses of teverelix acetate (either 0.5, 1, 2, 3, or 5 mg base) were investigated in a randomized, single-blind, placebo-controlled, dose-escalating parallel-group design in healthy men. Six subjects received teverelix, and two subjects received placebo per dose level. Blood samples for lutropin, luteinizing hormone (LH), and follitropin, follicle-stimulating hormone (FSH), and testosterone, as well as for pharmacokinetics, were withdrawn up to 120 hours after dosing. Serum hormone levels were determined by electrochemicoluminescence immunoassays, and plasma teverelix concentrations were determined by radioimmunoassay. RESULTS: Teverelix led to a rapid, marked suppression of LH, testosterone and, to a lesser extent, FSH. Median maximum suppressions compared with predose levels were -93% for LH and -54% for FSH after teverelix 5 mg, and -93% for testosterone after teverelix 3 mg, respectively. After 5 mg teverelix, testosterone suppression <1 ng/mL started a median of 12 hours after dosing and lasted for a median of 33 hours. The duration of testosterone suppression increased with dose. Geometric means of peak teverilix plasma concentrations were 4.5 ng/mL ( 0.5 mg teverelix) to 49.0 ng/mL (5 mg teverelix) and tmax occurred between 1 and 4 hours after dosing.

teverelix) and tmax occurred between 1 and 4 hours after dosing. Geometric means of the area under the teverelix plasma concentration—time course from zero to time of the last quantifiable plasma concentration [AUC(O-tlast)] were  $54.9 \text{ ng} \times \text{h/mL}$  (0.5 mg

teverelix) to 881.8 ng x h/mL (5 mg teverelix). Median values for apparent terminal half-lives ranged from 24 to 75 hours. The most frequently reported adverse events were short-lasting mild injection-site reactions. CONCLUSIONS: Teverelix showed pronounced LH and testosterone suppressive effects after single subcutaneous doses in healthy men. Duration of hormone suppression increased with dose. Teverelix was well tolerated. This profile indicates potential for further clinical use.

L2 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:459854 CAPLUS

DOCUMENT NUMBER: 133:305174

TITLE: Cetrorelix, ASTA Medica AG

AUTHOR(S): Norman, Peter

CORPORATE SOURCE: Norman Consulting, Burnham, Bucks, SL1 8JW, UK

Current Opinion in Oncologic, Endocrine & Metabolic SOURCE:

Investigational Drugs (2000), 2(2), 227-248

CODEN: COODF2; ISSN: 1464-8466

PharmaPress Ltd. PUBLISHER:

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

A review with 221 refs. ASTA Medica has developed cetrorelix, an AB

injectable LHRH antagonist for the treatment of sex

hormone-dependent disorders such as breast, ovarian and prostate cancers, benign prostate hyperplasia and gynecol. disorders including uterine myoma and endometriosis. Cetrorelix has been launched for the treatment of infertility in Germany, Sweden, Netherlands, Austria and Belgium. compound is in phase II trials for prostate cancer, benign prostatic hyperplasia and uterus myomatosus. In May 1999, cetrorelix was launched for the treatment of infertility in Germany and the UK, with subsequent launches in Sweden, The Netherlands, Austria and Belgium. In Nov. 1998, the company reported that cetrorelix was undergoing registration for the controlled induction of ovulation and on 13 Apr. 1999, it was approved by the European Commission for marketing in the 15 countries of the EU for the treatment of infertility. ASTA Medica and Ares-Serono intended to file a US NDA submission for cetrorelix in fertility treatment by the end of 1999. Two cetrorelix dosage regimens have been confirmed by EU regulators to avoid LH surge, (i) 0.25 mg powder and solvent solution for injection starting on days 5-6 of follicular stimulation; or (ii), 3 mg cetrorelix as a single dose given on the seventh day of follicular stimulation. The compound is in phase II trials for prostate cancer, benign prostatic hyperplasia and uterus myomatosus. In all three conditions initial reports indicate that 1-2-mo treatment with cetrorelix provides rapid, symptomatic relief. ASTA Medica has formed a joint venture company, Kayaku ASTA Medica Co Ltd, with Nippon Kayaku for joint development of cetrorelix. Cetrorelix is licensed to Shionogi in Japan, where it is in phase II trials. ASTA holds a patent,

AIDS-related disease. REFERENCE COUNT: 221 THERE ARE 221 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

WO-09500168, for the use of cetrorelix in the treatment of AIDS and

ANSWER 14 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:740190 CAPLUS

DOCUMENT NUMBER: 132:102992

TITLE: Ovarian stimulation for in-vitro

> fertilization/intracytoplasmic sperm injection with gonadotrophins and gonadotrophin-releasing hormone

analogues: agonists and antagonists

Felberbaum, R.; Diedrich, K. AUTHOR(S):

Department of Obstetrics and Gynecology, The Medical CORPORATE SOURCE:

University of Lubeck, Lubeck, 23538, Germany Human Reproduction (1999), 14(Suppl. 1), 207-221 CODEN: HUREEE; ISSN: 0268-1161

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal LANGUAGE: English

SOURCE:

The gonadotropin-releasing hormone (GnRH) antagonists Cetrorelix and Ganirelix have been used in recent years in clin. studies to prove that these compds. reliably prevent the onset of premature LH surges during ovarian stimulation. Cetrorelix has been applied in single and multiple dose protocols, while Ganirelix has until now only been used in the multiple dose protocol. In the latter protocol, ovarian stimulation is started on day 2 or 3 of the spontaneous cycle with human menopausal gonadotropin or recombinant FSH. Daily administration of the GnRH

antagonist at its min. ED (0.25 mg/day s.c.)

occurs from the sixth day of stimulation onwards until ovulation induction by human chorionic gonadotropin. In the single dose protocol, 3 mg of the GnRH antagonist Cetrorelix was injected on day 8 of the stimulation cycle. Both protocols have been proven to be safe and effective. Fertilization rates of >60% in in-vitro fertilization and >70% in intracytoplasmic sperm injection, as well as clin. pregnancy rates of .apprx.30% per transfer, sound most promising. The incidence of a premature LH surge is below 2%. The incidence of severe ovarian hyperstimulation syndrome seems to be lower under antagonist treatment than in the long agonistic protocol.

Treatment time is significantly shortened.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:293389 CAPLUS

DOCUMENT NUMBER: 129:1027

TITLE: Use of LH-RH antagonists as diagnostic agents

INVENTOR(S): Engel, Juergen; Diedrich, Klaus; Felberbaum, Ricardo

PATENT ASSIGNEE(S): Asta Medica A.-G., Germany SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	TENT NO.															
WO	9818482 W: AU,	BR,	HU,	A1 IL,	JP,	1998 , MX,	0507 NO,	NZ,	O 1 PL,	.997-DE RU, S	2456 G		1	9971	023	
	RW: AT,	BE,	CH,	DE,	DK,	ES,	FΙ,	FR,	GB,	GR, I	E, II	LU,	MC,	NL,	PT,	SE
DE	19644994 9852217			A1		1998	0507	D	E 1	.996-19	64499	4	1	9961	030	
AU	9852217			Α		1998	0522	A	.U 1	.998-52	217		1	9971	023	
AU	717538			В2		2000	0330									
EP	717538			A1		1999	0901	E	P 1	.997-94	7017		1	9971	023	
EP	938330			В1		2002	0206									
	R: AT,															
	IE, 9712456 335065	FΙ		_					_							
BR	9712456			A		1999	1019	В	R 1	.997-12	456		1	9971	023	
ΝZ	335065			A		2000	0623	N	Z 1	.997–33	5065		1	9971	023	
HU	9904642			A2		2000	0628	Н	:U 1	.999–46	42		1	9971	023	
JP	20015027	02		T		2001	0227	J	P 1	.998-51	9885		1	9971	023	
ΑT	9904642 20015027 212856 938330 2172818 2193414			T		2002	0215	A	T 1	.997–94	7017		1	9971	023	
PΤ	938330			T		2002	0731	P	T 1	.997–94	7017		1	9971	023	
ES	2172818			Т3		2002	1001	E	S 1	.997-94	7017		1	9971	023	
RU	2193414			C2		2002	1127	R	U 1	.999-11	1774		1	9971	023	
$_{ m PL}$	188998			В1		2005	0531	P	'L 1	.997–33	3174		1	9971	023	
	129293							I	L 1	.997-12	9293		1	9971	023	
TW	534817					2003	0601	Τ	W 1	.997–86	11589	5	1	9971	027	
CA	2219641			A1		1998	0430	С	A 1	.997-22	19641	-	1	9971	028	
zA	9709693			A		1998	0507	Z	A 1	.997–96	93		1	9971	029	
US	6106805			A		2000	0822	U	S 1	.997–96	1085		1	9971	030	
	9901920								0 1	999-19	20		1	9990	422	
NO	323690			В1		2007	0625									
TIAC	Y APPLN.	INFO	.:					D	E 1	.996-19	64499	94 .	A 1	9961	030	
								M	O 1	.997-DE	2456		W 1	9971	023	

AB A diagnostic agent for improving the effectiveness of hysteroscopy contains an LH-RH antagonist, especially Cetrorelix, to cause rapid regression of the thickness of the endometrium and thereby improve hysteroscopic visualization of pathol. conditions. The agent is administration before hysteroscopy and/or in preparation for operations, either in a single dose of

0.1-2 mg/kg or in multiple doses of 0.01-0.5

mg/kg by injection, preferably split over 1-14 days. The agent is further suitable for use in hysteroscopy with immediately following noninvasive therapy or surgery of pathol. conditions of the uterus such as myoma and endometrial hyperplasia.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:538778 CAPLUS

DOCUMENT NUMBER: 131:139954

TITLE: LHRH antagonists in the treatment

of fertility disorders

INVENTOR(S): Bouchard, Philippe; Frydman, Rene; Diedrich, Klaus;

Engel, Jurgen; Devroey, Paul

PATENT ASSIGNEE(S): Asta Medica AG, Germany SOURCE: Can. Pat. Appl., 15 pp.

CODEN: CPXXEB

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PRI(	CA 2200541 DRITY APPLN. INFO.:		19980722	CA 1997-2200541 US 1997-786937		
AB	A method of treating antagonist, prefers endogenous LH but of administration of earlows FSH secretic individual estroger single or dual s.c. 6 mg. In multiple s.c. in an amount if of LH-RH antagonist to 10, preferably of 9 and 20 of the mer LH-RH agonist or by can be given to avoid	ng inferably Cetton FSH exogenous on to be dose of dosing on the ray on day astruated HCG.	rtility disocrorelix, in secretion a us gonadotro e at natural opment. The in the range posol., LH-range of 0.1 LH-RH antag 4 to 8, and ion cycle by In addition erstimulation istered to	rders by administering amts. to selectively and inducing follicle pin. The selective selevels thereby not a LH-RH antagonist can of 1 mg to 10 mg, proceeding the selevels thereby not a selevels thereby not a selevel to 10 mg, proceeding the selevel to 0.5 mg onist is applied star ovulation can be induced administering rec. I rec. LH, native LH-Form syndrome and native avoid luteal phase star syndrome and native avoid luteal phase star selevel to the syndrome and selevel to the syndrome and native avoid luteal phase star selections.	ng a gro supp affe be adm tin aced RH o	n LH-RH ppress with by ression of LH cting given as a rably 2 mg - inistered g cycle day 1 between day native LH-RH, cr LH-RH agonist

L2 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:542142 CAPLUS

DOCUMENT NUMBER: 127:253169

TITLE: LH-RH antagonist compositions

INVENTOR(S): Ishiguro, Toshihiro; Furuya, Shuichi; Suzuki, Nobuhiro

PATENT ASSIGNEE(S): Takeda Seiyaku K. K., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09208496	A	19970812	JP 1996-14322	19960130
PRIORITY APPLN. INFO.:			JP 1996-14322	19960130
		105 050160		

OTHER SOURCE(S): MARPAT 127:253169

AB LH-RH antagonist compns. contain: (A) thienopyridine compds. e.g. (I) [R1-2 = H or linkage via N, C or S, R3 = (un)substituted polycyclic or other group, R4 = H, formyl, (un)substituted carbony group, etc., R5 = H, or linkage via C, n = 0-3] (prepns. given) as LH-RH receptor antagonists and (B) branched cyclodextrincarboxylic acid [e.g. 6-0-cyclomaltoheptaoxyl- $(6\rightarrow1)-\alpha$ -D-glucosyl- $(4\rightarrow1)-0-\alpha$ -D-glucuronic acid

 $\mbox{\sc Na}$  salt] to improve their solubility, bioavailability and stability. Solubility of

3-(N-benzyl-N-methylaminomethyl)-4,7-dihydro-7-(2,6-difluorobenzyl)-5-benzoyl-2-(4-isobutylaminophenyl)-4-oxoethieno[2,3-b]pyridine in the presence of 6-O-cyclomaltoheptaoxyl-(6+1)- $\alpha$ -D-glucosyl-(4+1)-O- $\alpha$ -D-glucuronic acid Na salt was 20.5 mg/mL vs. 0.5 mg/mL.

L2 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:511666 CAPLUS

Ι

DOCUMENT NUMBER: 129:255149

TITLE: Multiple dose protocol for the administration of

GnRH-antagonists in IVF: the "Lubeck-protocol"

AUTHOR(S): Felberbaum, R.; Diedrich, K.

CORPORATE SOURCE: Department of Obsterics and Gynecology, Medical

University of Lubeck (D), Germany

SOURCE: In Vitro Fertilization and Assisted Reproduction,

Proceedings of the World Congress of in Vitro

Fertilization and Assisted Reproduction, Vancouver, B. C., May 24-28, 1997 (1997), 397-404. Editor(s):

Gomel, Victor; Leung, Peter C. K. Monduzzi Editore:

Bologna, Italy. CODEN: 66MRAP

DOCUMENT TYPE: Conference LANGUAGE: English

Due to their different pharmacol. mode of action GnRH-antagonists are able to suppress serum-concns. of LH within hours. Instead of "down-regulation" and "desensitization" a classic competitive blockage of the GnRH-receptors on the cell-membrane of the gonadotrophic cells seems to take place. The "flare up", typical for agonistic GnRH-analogs is completely avoided. While the first generation of GnRH-antagonists caused important problems due to allergic reactions, which inhibited their clin. introduction, Cetrorelix and Ganirelix as representatives of the youngest generation of these compds. seem to avoid these disturbances completely. Cetrorelix was introduced first in our IVF-program to scrutinize the possibility of avoiding premature LH-surges. All patients were treated with human menopausal gonadotropin (HMG), starting on day 2. From day 7 until induction of ovulation by human chorionic gonadotropin (HCG)

Cetrorelix is administered s.c. in a daily fashion. Starting with a dosage of 3-mg Cetrorelix/day no premature LH-surges could be observed Also, 1 mg/day, 0.5 mg/day and 0.

25 mg/day administered according to the described

"Lubeck-protocol" avoided any premature LH-surges. The mean courses of FSH and LH in the different dosage groups were quite similar with a profound suppression of LH. Estradiol concns. reflected a satisfactory follicular development. The fertilization-rate after IVF in cases of tubal infertility or ICSI in cases of male subfertility were within the range to be expected after normal oocyte maturation.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:1819 CAPLUS

DOCUMENT NUMBER: 126:55018

TITLE: Hormonal profile during the follicular phase in cycles

stimulated with a combination of human menopausal gonadotropin and gonadotropin-releasing hormone

antagonist (Cetrorelix)

AUTHOR(S): Albano, C.; Smitz, J.; Camus, M.; Riethmuller-Winzen,

H.; Siebert-Weigel, M.; Diedrich, K.; Van Steirteghem,

A. C.; Devroey, P.

CORPORATE SOURCE: Centre for Reproductive Medicine, University Hospital

and Medical School, Dutch-speaking Brussels Free

University, Brussels, 1090, Belg.

SOURCE: Human Reproduction (1996), 11(10), 2114-2118

CODEN: HUREEE; ISSN: 0268-1161

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal LANGUAGE: English

AB A third-generation gonadotropin-releasing hormone antagonist (Cetrorelix) was used during ovarian stimulation in 32 patients undergoing assisted reproduction, to prevent the premature LH surge. In all patients, ovarian stimulation was carried out with two or three ampoules of human menopausal gonadotropin (HMG), starting on day 2 of the menstrual cycle. In addition, 0.5 mg of Cetrorelix was administered daily

from day 6 of HMG treatment until the day of ovulation induction by human chorionic gonadotropin (HCG). A significant drop in plasma LH concentration

was

observed within a few hours of the first administration of Cetrorelix. Moreover, no LH surge was detected at any point in the treatment period in any of the 32 patients. A mean estradiol concentration of 2122±935 ng/l was observed on the day of the HCG administration, indicating normal folliculogenesis. Like LH, progesterone concentration also dropped within a

few

hours of the first administration of Cetrorelix. A  $0.5\,$  mg daily dose of Cetrorelix prevented a premature LH surge in all the 32 patients treated.

L2 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:249914 CAPLUS

DOCUMENT NUMBER: 124:279399

TITLE: A new method for controlling the precise time of

occurrence of the preovulatory gonadotropin surge in

superovulated goats

AUTHOR(S): Baril, G.; Pougnard, J. L.; Freitas, V. J. F.;

Leboeuf, B.; Saumande, J.

CORPORATE SOURCE: Station de Physiologie de la Reproduction des

 ${\tt Mammiferes\ Domestiques,\ Institut\ National\ de\ la}$ 

Recherche Agronomique, Nouzilly, 37380, Fr.

SOURCE: Theriogenology (1996), 45(3), 697-706

CODEN: THGNBO; ISSN: 0093-691X

PUBLISHER: Elsevier DOCUMENT TYPE: Journal LANGUAGE: English

AB In goats treated to induce superovulation, insemination at a predetd. time after the end of progestagen treatment leads to a low fertilization rate. To solve this problem we developed a new treatment based on the control of the occurrence of the endogenous LH peak with a GnRH antagonist

(Antarelix). The first experiment was designed to determine the dose of LH required  ${}^{\prime}$ 

to mimic a spontaneous LH preovulatory discharge; the injection of 3 mg, i.v. of pLH induced a peak of the same amplitude and duration as the spontaneous peak. Subsequently, in the second experiment, we compared 2 doses of Antarelix (0.5 and 1 mg, s.c.) administered 12 h after sponge removal (9 goats/treatment group). The dose of 0.5 mg was selected for further expts. because it was effective in the inhibition of the endogenous LH peak and had no detrimental effect on the quality of embryos. In the final experiment, 48 goats received the new treatment and were inseminated (intrauterine) only once 16 h after LH injection; 41 were flushed and produced 5.3 (m) transferable embryos. The developmental stage and the number of cells/embryo were within the range that has been reported for embryos produced with conventional treatments. In conclusion, with the described method, it is possible to inseminate goats at a predetd. time without decreasing the number of transferable embryos. This technique will encourage the development of embryo transfer within genetic programs, and it will be a valuable tool for the production of zygotes for gene transfer.

L2 ANSWER 21 OF 25 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 92175455 MEDLINE DOCUMENT NUMBER: PubMed ID: 1794654

TITLE: Acute and subchronic toxicity studies with detirelix, a

luteinizing hormone-releasing
hormone antagonist, in the rat and

monkey.

AUTHOR: Chester A E; Fairchild D G; Depass L R

CORPORATE SOURCE: Institute of Toxicologic Sciences, Syntex Research/R2-ITS,

Palo Alto, California 94303.

SOURCE: Fundamental and applied toxicology: official journal of

the Society of Toxicology, (1991 Oct) Vol. 17, No. 3, pp.

505-18.

Journal code: 8200838. ISSN: 0272-0590.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199204

ENTRY DATE: Entered STN: 24 Apr 1992

Last Updated on STN: 24 Apr 1992 Entered Medline: 6 Apr 1992

AB Acute (single dose), 2-week, and 3-month toxicology studies were conducted with detirelix, a luteinizing hormone-releasing hormone (LHRH) antagonist, in rats and cynomolgus monkeys. Acute studies were conducted by intravenous and subcutaneous injection. Subchronic studies were conducted by daily subcutaneous injection. Clinical signs after a single intravenous dose included lethargy, edema, cyanosis, pallor, and red ears in rats at greater than or equal to 0.3 mg/kg and lethargy and facial flushing in monkeys at greater than or equal to 0.5 mg/kg. In subchronic studies, detirelix at greater than or equal to 0.4 mg/kg/day (rats) and at greater than or equal to 0.2 mg/kg/day (monkeys) produced atrophy of the reproductive organs, inhibition of ovulation and spermatogenesis, decreased body weight gain in

male rats and monkeys, and increased body weight gain in female rats. In the rat, morbidity and/or mortality occurred throughout the treatment phase at a subcutaneous dose of greater than or equal to 2.0 mg/kg/day. In both species, the time to recovery of normal reproductive organ morphology and function was directly related to dose. Exogenous testosterone decreased the severity of reproductive and body weight effects in male rats. In conclusion, the acute effects of detirelix were consistent with peripheral vasodilation. Subchronic effects were associated with inhibition of pituitary gonadotropic and gonadal hormone secretion.

L2 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:841 CAPLUS

DOCUMENT NUMBER: 114:841

TITLE: Gonadotropin-releasing hormone (GnRH) agonists and

GnRH antagonists do not alter endogenous GnRH

secretion in short-term castrated rams

AUTHOR(S): Caraty, Alain; Locatelli, Alain; Delaleu, Bernadette;

Spitz, Irving M.; Schatz, Bernard; Bouchard, Philippe

CORPORATE SOURCE: Stn. Physiol. Reprod., Inst. Natl. Rech. Agron.,

Nouzilly, 37380, Fr.

SOURCE: Endocrinology (1990), 127(5), 2523-9

CODEN: ENDOAO; ISSN: 0013-7227

DOCUMENT TYPE: Journal LANGUAGE: English

To determine if GnRH analogs act on GnRH secretion through a short or ultrashort loop feedback mechanism, expts. were performed to analyze GnRH secretion in hypophyseal portal blood of conscious short-term castrated rams under both agonist or antagonist treatment. In Study 1, rams were castrated and surgically prepared for portal blood collection on day -7. Portal and peripheral blood were collected simultaneously every 10 min for 14-15 h on day 0. Five h after the beginning of the portal blood collection, animals were injected i.m. with 5 mg potent GnRH antagonist (Nal-Glu). In Study 2, rams were treated daily from day -11 to day 0 with the GnRH agonist D-Trp6 GnRH (0.5 mg i.m.). Castration and surgical preparation for portal blood collection were performed on day -7. On day 0 portal and peripheral blood were collected simultaneously every 10 min for 10-11 h. In both studies, to determine whether an increase in GnRH concentration in hypophyseal portal blood can overcome the inhibitory effect of the GnRH analogs, between 5 and 5.5 h after the injection of the analogs, endogenous GnRH secretion was stimulated by naloxone administration (3 + 100 mg, i.v., at 30-min intervals) followed by a bolus of exogenous GnRH (2 + 10  $\mu$ g, i.v., at 30-min intervals). In study 1, Nal-Glu administration led to a rapid cessation of pulsatile LH secretion for the duration of blood collection, whereas GnRH pulse frequency and amplitude were not affected. GnRH and LH pulse frequency before and after Nal-Glu administration were, 6.2 vs. 5.7 and 5.3 vs. 0.3 pulses/6 h, resp. In Study 2, peripheral LH secretion was completely suppressed, whereas GnRH secretion (portal blood) remained pulsatile. GnRH pulses frequency and pulse amplitude were 4.3 pulses/6 h and 43.0 7 pg/mL, resp. In both expts., neither stimulation of endogenous GnRH secretion by naloxone nor administration of exogenous GnRH allowed reinitiation of LH secretion. However, addnl. studies in animals of each treatment group (study III) showed that this was clearly a dose-related effect in antagonist treated but not in agonist-treated animals since higher doses of exogenous GnRH (i.e.  $100~\mu g$  or  $1000~\mu g$ ) can increase LH levels. Thus, in short-term castrated ram, neither GnRH agonist nor GnRH antagonist administration affect endogenous GnRH secretion either directly by an action on GnRH neurons or indirectly by a decrease in LH secretion. These results, therefore, do not support a role for both a short loop and ultrashort loop feedback mechanism in castrated rams.

L2 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1988:400976 CAPLUS

DOCUMENT NUMBER: 109:976

TITLE: Hormonal effects of single gonadotropin-releasing

hormone antagonist doses in men

AUTHOR(S): Jockenhovel, F.; Bhasin, S.; Steiner, B. S.; Rivier,

J. E.; Vale, W. W.; Swerdloff, R. S.

CORPORATE SOURCE: Harbor-UCLA Med. Cent., Torrance, CA, 90509, USA SOURCE: Journal of Clinical Endocrinology and Metabolism

(1988), 66(5), 1065-70

CODEN: JCEMAZ; ISSN: 0021-972X

DOCUMENT TYPE: Journal LANGUAGE: English

To assess its gonadotropin-inhibiting potency in man, different doses of a gonadotropin-releasing hormone (GnRH) antagonist ([Ac-D2-Nal1,D4-C1-Phe2, D3-Pal3, Arg5,D4-p-methoxybenzoyl-2-amino butyric acid6,D-Ala10]GnRH) (I) were given to normal men. Single s.c. doses of 0.5, 1.5, and 5.0 mg I decreased mean serum immunoactive LH (iLH), to 45.0, 37.0, and 31.3% of baseline, resp. Maximal suppression occurred between 4 and 8 h after drug injection. Serum bioassayable LH concns. diminished 8 h after injection of 1.5 and 5.0 mg I, but not after the 0.5-mgdose. Mean serum testosterone (T) fell to 39.8, 32.1, and 20.7% of baseline, resp., after the 0.5-, 1.5-, and 5.0-mg doses. The decreases in serum iLH and testosterone (T) were more sustained after the higher doses; serum iLH and T were suppressed 24 h after administration of the 5.0-mg dose. The 24-h integrated serum iLH and T concns. decreased in a dose-dependent manner. However, basal and 24-h integrated serum FSH concns. were not affected by I. No adverse systemic side-effects occurred. Thus, I effectively decreases serum LH and T concns. in a doseand time-dependent manner, and it, therefore, has potential as a male contraceptive.

L2 ANSWER 24 OF 25 MEDLINE on STN DUPLICATE 4

ACCESSION NUMBER: 83261620 MEDLINE DOCUMENT NUMBER: PubMed ID: 6409590

TITLE: Is the postovulatory release of follicle-stimulating

hormone in the rabbit mediated by luteinizing

hormone-releasing hormone?.

AUTHOR: Mills T M; Copland J A; Coy D H; Schally A V

CONTRACT NUMBER: BRSG-S-07RR05365-21 (United States NCRR)

HD-0-2831 (United States NICHD) HD-16431 (United States NICHD)

SOURCE: Endocrinology, (1983 Sep) Vol. 113, No. 3, pp. 1020-4.

Journal code: 0375040. ISSN: 0013-7227.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 198309

ENTRY DATE: Entered STN: 19 Mar 1990

Last Updated on STN: 3 Feb 1997 Entered Medline: 23 Sep 1983

AB Studies were performed to determine whether the postovulatory secretion of FSH in the rabbit is an LHRH-mediated event. Does were mated and then injected at 12 and 18 h postcoitum with pentobarbital (30 mg/kg BW), an agent known to block endogenous LHRH release. The injection of this barbiturate had no measurable effect on the postovulatory FSH secretion pattern. Administration of the LHRH antagonist [Ac-D-p-C1-Phe1,2, Phe3, D-Arg6, D-Ala10]LHRH (0.5 mg/doe) prevented all gonadotropin release in response to LHRH injection (10 micrograms/kg BW). When this same dose of the antagonist

was injected at 18 h postcoitum, the postovulatory FSH secretion pattern was unaffected. Finally, to prove that the pituitary was sensitive to LHRH at 18-h postcoitum, LHRH (10 micrograms/kg BW) was injected into rabbits mated 18 h earlier; this treatment led to a marked increase in FSH secretion showing that the pituitary is responsive to LHRH at this time. The results of this study show that two drugs which block LHRH-mediated gonadotropin release have no effect on the postovulatory secretion of FSH and support the concept that this episode of FSH secretion occurs via a pathway which does not include the hypothalamic secretion of LHRH.

L2 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:593440 CAPLUS

DOCUMENT NUMBER: 97:193440

ORIGINAL REFERENCE NO.: 97:32237a,32240a

TITLE: Suppression of ovulation in the rat by an orally

active antagonist of luteinizing hormone-releasing

hormone

AUTHOR(S): Nekola, M. V.; Horvath, A.; Ge, L. J.; Coy, D. H.;

Schally, A. V.

CORPORATE SOURCE: Sch. Med., Tulane Univ., New Orleans, LA, 70112, USA

SOURCE: Science (Washington, DC, United States) (1982),

218 (4568), 160-2

CODEN: SCIEAS; ISSN: 0036-8075

DOCUMENT TYPE: Journal LANGUAGE: English

AB A synthetic antagonist of LH-RH [N-acetyl-D-p-chloro-Phe1,2-D-Trp3-D-Arg6-D-Ala10]-LH-RH (I) [83539-08-6] blocked ovulation in rats in a dose-dependent manner when given by gavage on the afternoon of proestrus.

Ovulation was delayed for at least 1 day in all animals given 2 mg I and

in some of the animals treated with 1 or 0.5

mg. Oral administration of 2 mg also blocked the preovulatory surge of LH [9002-67-9]. This demonstration that antagonists of LH-RH can have oral antiovulatory activity clearly enhances their therapeutic potential.

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